

CLAIMS

1. A method for detecting lipolytic enzyme or amidase activity in a sample, comprising the steps of:
 - 5 a) incubating the sample with a substrate having one or two polyunsaturated fatty acyl groups linked through amide or ester bond(s) to allow hydrolysis of the amide or ester bond(s),
 - b) simultaneously or subsequently incubating the sample with a lipoxygenase to allow formation of a hydroperoxide of the polyunsaturated acid, and
 - c) detecting the formation of the hydroperoxide.
- 10 2. The method of the preceding claim wherein the polyunsaturated fatty acyl group is linoleoyl (18:2).
3. The method of claim 1 or 2 wherein the substrate is a polar lipid.
4. The method of claim 3 wherein the substrate is a galactolipid, particularly digalactosyl diglyceride (DGDG) or monogalactosyl diglyceride (MGDG).
- 15 5. The method of claim 3 wherein the substrate is a phospholipid, particularly lecithin, L- α -phosphatidylcholine; dilinoleoyl-phosphatidylcholine.
6. The method of claim 1 or 2 wherein the substrate is a sterol ester, particularly cholesterol linoleate.
7. The method of claim 1 or 2 wherein the substrate is a wax ester, particularly arachidyl
20 linoleate
8. The method of claim 1 or 2 wherein the substrate is a monoester, particularly 1,3-dibutyl-2-linoleyl glycerol, 2,3-dibutyl-1-linoleoyl-glycerol or linoleic acid isopropyl ester.
9. The method of claim 1 or 2 wherein the substrate is an aryl ester, particularly linoleic acid phenyl ester.
- 25 10. The method of claim 1 or 2 wherein the substrate is a mono- or diamide, particularly 1,6-diaminohexane linoleic acid diamide.

11. A method of detecting lipolytic enzyme or amidase activity in a test sample, comprising the sequential steps of:

a) incubating the sample with a lipoxygenase and a substrate having one or more polyunsaturated fatty acyl groups linked through amide or ester bonds, to allow formation of a hydroperoxide of the polyunsaturated acid,

b) incubating with a ferrous salt and xlenol orange to allow color generation, and

c) detecting color generation.